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**Guisborough
Urban District Council.**



**NORTH RIDING (GUISBOROUGH)
COMBINED DISTRICTS.**

**. REPORT .
for the Year 1925**

of the Medical Officer of Health,
**C. R. GIBSON, M.A., M.B., Ch.B.
D.P.H.**

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TO THE CHAIRMAN AND MEMBERS
OF THE
GUISBOROUGH URBAN DISTRICT COUNCIL.

GENTLEMEN,

THE Ministry of Health, in circular 648, have requested that the Annual Report for 1925, of the Medical Officer of Health be drawn up on fuller lines than the immediately preceding ones: that it be, in fact, what is called a Survey Report, and I therefore present this Report in accordance with the Ministry's requirements.

Natural and Social Conditions of the Area.

Area (acres) 7,034.

Population : Census 1921, 7,104.

Registrar-General's estimate, 1925, 6,970.

Number of *Inhabited Houses* (1921) 1,471.

New houses erected, mid-1921 to mid-1925: 5.

Number of families or separate occupiers (1921) : 1,520.

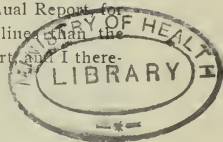
Rateable Value : £34,899.

Sum represented by a penny rate: £145.

Physical Features and General Character of the Area :—The district is mostly contained in the shallow valley lying east and west, at an altitude of some 300 feet, between the moors of the Cleveland hills on the south, and, on the north, the range of hills running south of Eston to beyond Upleatham. The town of Guisborough, in which is concentrated nine-tenths of the population, lies near the eastern end of the valley. The geological strata are lower lias, containing ironstone, and the surface of the valley is good agricultural land.

Social Conditions :—At the 1921 census 50% of the occupied males were miners, engaged in ironstone mines in the district or on its borders ; 9% were metal workers, engaged in a local foundry, these two occupations being the main ones in the district.

Vital Statistics :—The mean standardised death-rate for the district over the five years 1921 to 1925 has been 11.8, the average over England and Wales for the same period being 12.2. Considering the advantages enjoyed by the inhabitants, in the matter of fresh-air and sunlight, that are denied to some extent the dwellers in the large towns, this comparison cannot be reckoned as too favourable to the district : the neighbouring district of Skelton and Brotton, for example, has experienced in these years a standardised death-rate of 11.0, while in the Loftus Urban District the rate has been as low as 9.6. The annual death-rate is almost invariably the largest, or the second largest, of the rates in the six districts of the Guisborough Union : it is true that the large proportion of aged residents favours a higher death-rate, but when due allowance is made for this (by "standardising"), the rate still occupies the same comparative position. The annual death-rate in 1925 has been 14.2, a small decrease from the 14.6 of 1924. The birth-rate has been 21.0, as compared with 20.9 in the preceding year, while the infant mortality rate has been 82, against 68 in 1924, and a rate of 75 over England and Wales in each year.



Poor-Law Relief :—The district, in common with other ironstone-mining districts in the neighbourhood, has suffered severely from the depression which, in 1921, succeeded the post-war boom. Unemployment has continued at a high level up to the year under review, and a large proportion of the population have been subsisting for years either on unemployment pay or on poor-law relief.

It might be expected that a general lowering of the standard of living, continued over this number of years would have affected the health of the population with noticeable effects on the death-rate. Such effects, however, are not obvious, and have to be searched for to be discovered at all. The death-rate among children has not increased, nor has it increased among adult males: in adult females a definite, though slight increase, is evident. In 1920, the last year in which a high standard of living was prevalent, the male death-rate, at ages 15 to 64, was 13.6 per thousand at these ages: the average for the five years 1921—1925 has been 7.6, a very considerable reduction. The female death-rate, at ages 15—64, was, in 1920, 6.1, and averaged over the following five years, 6.8: a slight increase, but in marked contrast to the change in adult male mortality.

Use made of Hospitals and other forms of gratuitous Medical Relief :—

The Union Infirmary is situated in the district and also a cottage hospital, the Admiral Chaloner Hospital, originally intended for cases of accident in the mines, but latterly used for a wide class of patients. In the three years 1923—1925 35 deaths of residents (12½% of all deaths) occurred in hospitals. Sixteen of these were in the Union Infirmary, ten in the Admiral Chaloner Hospital, two in the North Ormesby Hospital, one in the North Riding Infirmary (both Middlesbrough institutions) and six in mental hospitals. It may be concluded that about one in eight of the serious cases of sickness receive gratuitous or assisted treatment in hospitals.

General Provision of Health Services in the Area.

Hospitals provided or subsidised ;

	(a) by the Local Authority.	(b) by the County Council.
(1) Tuberculosis	—	Wensleydale Sanatorium, Aysgarth. Rntson Hospital, Northallerton. Phillipson's Home, Stannington. Morris Grange, Catterick.
(2) Maternity	—	Middlesbrough Maternity Hospital.
(3) Children	—	—
(4) Fever	Isolation Hospital.	—
(5) Smallpox	Joint Smallpox Hospital.	—
(6) Other	—	—

Isolation Hospital:—The present hospital for fever cases is situated near the edge of the moors one mile south of the town: it consists of an adapted cottage, where the resident caretaker lives, and which also contains one ward with two beds occasionally used for patients; along with an adjoining wood lined iron building, divided into two wards containing, in all, seven beds. A trained nurse is obtained when there are any patients. Water is laid on, and drainage is taken to the town sewer. Lighting is by oil lamps. The site is very small, and the size of the building is not enough for the nine beds provided, which number has been found inadequate for a large epidemic, such as that of scarlet fever in 1924. The cottage also is damp and there is no bath-room. The district therefore has joined with the Guisborough Rural District in constituting a Joint Hospital Board for the two districts, a suitable site has been bought halfway between the present hospital and the town, and proposals are on foot to erect there for the two districts a Joint Hospital, containing provision, in two separated blocks, for 16 patients, and capable of extension when required.

Joint Smallpox Hospital:—The Council is a member of the Guisborough Joint Smallpox Hospital Board, maintaining a hospital on a site in the Guisborough Rural District, between New Marske and Dunsdale, and east of the Redcar Waterworks Pumping Station. The buildings comprise: (a) a wood and galvanised iron ward-block, containing two wards, each with six beds, and, in the central portion, a kitchen and three bedrooms; (b) a contact block, asbestos cement sheets and wood, containing two bedrooms and a connecting living-room; (c) a wood and galvanised iron laundry, ambulance and coal-shed; (d) a small disinfecting hut.

The water supply was altered in 1924 and is now pumped to a storage tank on the hospital site from the neighbouring Redcar pumping station. The drainage system also has been entirely relaid during the latter half of 1925, and is now taken to a small covered settling tank outside the hospital site, from which it is discharged through open-jointed agricultural pipes by land filtration. Heating of the wards is by coke stoves, lighting by oil lamps. The hospital is not on the telephone system. There is a resident caretaker and nurses are obtained when required. Thirteen smallpox patients were admitted to the hospital from Redcar in the first half of 1925, as well as three patients from the Guisborough Rural District. In 1924 twenty smallpox cases from Redcar were treated there, and in the preceding two years two suspected cases had been admitted, one from Redcar and the other from Guisborough Urban District, neither being finally diagnosed as smallpox.

Institutional Provision for Unmarried Mothers, Illegitimate Infants, and Homeless Children in the Area: Nil, except as provided by the Poor Law Authorities, who admit pauper unmarried mothers to the Union Infirmary for confinement, and maintain a home for orphan or homeless children.

Ambulance Facilities: (a) for Infections Cases: a horse-drawn ambulance, a rubber-tired four-wheeler, was obtained in 1923.

(b) for non-infectious and accident cases: the British Red Cross Society maintain in Guisborough an Ambulance, the use of which is obtainable on payment.

Clinics and Treatment Centres:

	Provided by the Local Authority.	Provided or subsidised by the County Council.
Maternity and Child Welfare Centre.	At the Chaloner Hall, New Road, every Thursday afternoon at 2-30 : a large meeting hall, with screened-off portions for weighing, and doctor's consulting room.	
School Clinic	—	At South Bank.
Tuberculosis Dispensary ...	—	At Skelton.
Treatment Centre for Venereal Diseases ...	—	At Stockton & Thornaby Hospital.

Public Health Officers of the Local Authority: particulars of these are given in Table 6. Mr. Kilburn holds the Sanitary Inspector's Certificate of the Royal Sanitary Institute.

Professional Nursing in the Home:—(a) General: there are two Nursing Associations, each employing a trained nurse, independent of any arrangements with the local authority.

(b) for Infectious Disease: nil.

Midwives: The Council make no arrangements, financial or otherwise, with practising midwives, of whom there are two in the District.

Chemical Work:—This has in the past been submitted to Messrs. Pattinson and Stead, Middlesborough, or the County Analyst. A large number of examinations of water, as regards acidity and action on lead, have been made also by myself.

Following is a copy of an analysis made of a sample of water from Guisborough beck :

" Report on Water received from Dr. Gibson, April 16th, 1925.

Locality and source: Taken from the Beck, 20 feet west of the surface water drain from Northgate.

Colour of water in 2-foot tube, Loviband's units: 1.5 yellow and 0.4 blue.

Smell at 100° Fahrenheit: none.

The sample contains, in grains per gallon :

Chlorides, equivalent to common salt	...	...	...	3.46
Nitrates, equivalent to calcium nitrate	...	...	...	trace
Nitrites	...	...	...	none
Calcium and magnesium salts and Volatile matter	...	...	...	70.74
*Total dissolved solids (dried at 212° F.)	...	...	...	74.20

*Behaviour on ignition does not blacken.

Injurious metals none

Ammonia 0.005

Also organic ammonia 0.004

Sediment: Moderate, earthy matter, etc.

Microscopic Examination: Shows the presence of a few animalculæ.

This is a very hard water containing much calcium carbonate and sulphate in solution. It does not show any indications of household drainage, trade refuse, or tarry or oily matter from tar roads.

(Signed) B. A. BURRELL."

Legislation in force in the District: See Table 4.

Sanitary Circumstances of the Area.

Water:—The hamlets of Barnaby Moor and Mount Pleasant have water supplies from Messrs. Bolckow, Vaughan & Co., but the major portion of the district, that is, the town of Guisborough, as well as the farms on the Guisborough Estate, are supplied by the Guisborough Water Co.

This latter has a reservoir at Westworth Plantation, on the moors, two miles south east of the town. The water is a moorland surface water, filtered through Candy's filters, of which there is a battery of three, and then led through a small covered service reservoir to the town. This water has long been known to act upon lead and therefore for many years some form of treatment has been adopted by the Water Company with the view of removing this quality. At first lime was added, but this was given up, and a solution of soda-ash, or carbonate of soda, was used as the neutralizing agent. Up till the end of 1922 the solution of soda ash was run into the service reservoir so as to give an average of one grain of soda per gallon of water: the daily consumption of water was about 150,000 gallons, and about 48 lbs of soda-ash (containing 58% light grade ammonia alkali) was added in solution each day. In the winter the fine jet through which the solution was discharged occasionally became blocked by crystallization, and, apart from this, it was surmised and afterwards found that the acidity of the untreated water would vary considerably, and might at times be much more than would be neutralized by the addition of 48 lbs. of soda-ash per day.

The Water Company agreed to the representations of the Council on these points: steps were taken to ensure that the temperature of the soda-mixing tanks, pipes and jet was not allowed to fall so low as to incur risk of blockage by crystallization, the acidity of the untreated water was taken daily and the strength of the soda solution adjusted to secure neutralization; further, the efficacy of the treatment was controlled by a daily estimation of the reaction of the treated water, and a test, once or twice monthly, of the action of the treated water on lead. These alterations were instituted at the end of 1922, since when the process has worked satisfactorily, with the exception of two short intervals, in March, 1923, and November, 1925, when mechanical obstructions to the flow of soda solution had occurred. Under the improved method of treatment lead-poisoning in the district is now not heard of: previously two or three cases at least were each year reported. Altogether I have made several hundred tests of the water. The solvent action on lead corresponds roughly with the acidity of the water: when most acid it has the most solvent action, and on reducing the acidity the solvent action lessens until when the water is made alkaline the action on lead is at a minimum although it may not disappear altogether. It has been suggested that the acid is sulphuric acid, derived from the weathering of iron pyrites: I have never been able to find

evidence of the presence of free mineral acid, but on the contrary the acidity reacts to various indicators as if it were due to free carbonic acid. Of late years very convenient PH. Indicator Tablets have been put on the market, enabling a rapid estimation of acidity to be made with the minimum of apparatus, and ideal for use 'in the field.' With a small bottle of tablets and a test-tube, or, better still, a white china egg-cup, estimations on the spot may be made of all the runners and springs feeding the reservoir. I have used Indicator Tablets obtained from Messrs. Allen and Hanbury's which give a range of colour from red, corresponding to PH. 4, through orange, yellow, green, blue, to a deep violet corresponding to PH. 11. A PH. figure less than 7 denotes acidity, and the smaller the figure the greater the degree of acidity. On the 9th May, 1923, the water in the reservoir, beside the overflow weir, had a PH. figure of $4\frac{1}{2}$ and was therefore markedly acid: the western feeder had a figure of 6, the south-western and the southern, both 4. Six springs on the north-west of the reservoir are collected and discharged into the main: these had figures of $5\frac{1}{2}$ and 6; four other springs on the south-east which are similarly collected to the main also had figures of $5\frac{1}{2}$ and 6. The treated water should have a figure of not less than 8, corresponding to a pure green tint with the indicator tablets: a yellowish shade in the green is a warning of danger. Throughout most of 1925 the acidity of the untreated water equalled in strength that produced by the addition of 0.7 ccs. decinormal sulphuric acid to 100 ccs. of neutral water, but it varies irregularly: after remaining constant for several weeks it will suddenly rise to 0.9 ccs., or drop to 0.5 ccs.

The water is very soft and pure. On a few occasions it has been turbid and brown, with a considerable amount of sediment. This has been due either to prolonged drought in warm weather, such as the summer of 1921, when, with the reservoir being low, the water contains a large amount of organic matter from the peat or heather that the filters cannot deal with, or to accumulated deposits in the mains, remedied by flushing.

Since the drought of 1921 the supply has been sufficient in quantity: the recurrence of a similar drought would be followed by the same difficulties that were then experienced. The reservoir is said to contain when full 15 million gallons, or nearly 100 days' supply; before however 60 days supply is drawn from it the water would become unusable, owing to heavy charging with vegetable matter.

Barnaby Moor has a double supply: water for drinking and cooking is obtained from a spring, while washing water is obtained from two taps at the rear of the cottages.

Mount Pleasant is supplied from a spring near Park House, the water being collected in a small tank.

Rivers and Streams.—The beck flowing through Gnisborough is subject to intermittent pollution from some undiscovered source: except for these brief periods the water is clean, as is seen from the analysis given on page 6.

But after it passes the Council's sewage farm the beck is always heavily polluted, unfit for cattle to drink, and, in hot weather, giving off an offensive smell for a mile or so below the farm. This condition has obtained for years and has been frequently reported. Its remedy would entail a recasting of the sewage disposal arrangements.

Drainage and Sewerage:—Guisborough itself is sewered, the sewage, after passing through covered sludge tanks, being treated at the sewage farm, an area of 25 acres a short distance west of the town. The sewage is led on to the surface of the soil, which is under-drained, at a depth of three-and-a-half to four feet, with open agricultural drains to discharge the effluent into the beck flowing through the farm. The effluent is not satisfactory and the beck is heavily polluted. Preliminary enquiries respecting a modern method of sewage treatment were made in 1921 but owing to the trade depression in the district, no further steps have yet been taken.

Closet Accommodation:—Estimates of the closet provision in Guisborough at different dates are given below :—

	Dec. 31st, 1913.	Dec. 31st, 1920.	Dec. 31st, 1925.
Privies with fixed receptacles	146	110	16
Pail-closets	1084	1105	1094
Water-closets	298	315	410

From 1920 to 1924 95 privies and 14 pail-closets were converted to water-closets: no conversions were carried through in 1925, but it is expected that all the remaining privies will be converted to water-closets during the current year.

Scavenging:—Pail-closets and ash-bins are emptied weekly, dry refuse being collected during the day. There are still 50 dry ashpits, which are emptied as required: it would be very much to the householder's advantage to discontinue the use of these and to supply instead a covered, sanitary, galvanized dust-bin, which would be emptied weekly, and so obviate the retention of garbage for long periods near the dwelling.

Refuse, after collection, is carted to a tip on the north side of Park Lane, opposite the end of Cleveland Street, and 150 yards distant from houses.

Sanitary Inspection of the Area:—An abstract of this is given in Table 5. The great majority of nuisances discovered—chiefly leaking closet pans—are remedied on informal notice.

Smoke Abatement:—Most of the local smoke is due to the domestic coal-fire, although, at times, the foundry emits quantities of dark-coloured fumes. No action has been taken by the local authority with a view to smoke abatement.

Premises and Occupations which can be controlled by Byelaws and Regulations:—

(1) Common Lodging-houses:—There is one in the district, formerly registered for 14 lodgers, but as the accommodation had been altered the particulars on the register were revised in 1922 and provision for 11 lodgers allowed. It is kept clean and well ventilated.

(2) Offensive trades: fish-frying has been declared an offensive trade in the district, and five of these businesses have been allowed. The premises are maintained in clean condition and the conduct of the trade is satisfactory.

(3) Tents, Vans and Sheds: Bye-laws were passed in 1917. During the summer a few tents are occupied in the rural parts of the district, more especially near the Cross Keys Inn. Living vans also stand for a few weeks or months at a time on waste ground at the foot of Wilson Street and in Cleveland Street. No complaints have been received.

(4) Underground sleeping-rooms: There are none in the district.

Schools:—There is a public elementary school in Northgate, Guisborough, for boys and infants; another in Providence Street, for girls and infants; and a small mixed one at Barnaby Moor.

The Barnaby Moor School has no water-supply on the premises; the others have water laid on. Northgate and Providence Schools have water-closets; the Barnaby Moor pail-closets.

Besides these there is the Guisborough Grammar School, dating from ancient times, and two small private schools.

Housing.

General Housing Conditions in the Area:—There has been little alteration in the housing conditions in the district since 1911: both the population and the total number of houses has experienced little or no growth, but, as the size of the family is now smaller than previously, the same total population corresponds to a greater number of families, and this increase in the number of families did cause, for a few years after the war, some housing shortage. This has largely adjusted itself and there is now no actual house shortage, although vacant houses are rare and their relative absence makes it more difficult to deal with the few cases of overcrowding that crop up.

The Council scheme proposed in 1919 for the building of 39 houses was held up and finally abandoned owing to trade depression.

The growth or shrinking of the population depends mainly on conditions in the ironstone mining industry. This experienced a severe set-back at the time of the coal stoppage in 1921 when the ironstone mines, employing one-half of the men in the district, were closed for a prolonged period: one of them not having been re-opened. Another coal-stoppage in the current year has again entailed a complete closing down of the ironstone mines, and the local hardship produced is probably greater than in the colliery districts. It is not surprising then, that the population is slowly shrinking rather than growing, and no increase can be expected until the industry has a chance to recover.

Overcrowding:—There is no serious overcrowding. Occasional cases of slight overcrowding, due to the taking of lodgers, have come to notice, and have been abated on informal notice.

Fitness of Houses:—No systematic house inspection has been done of recent years and random inspection shows the necessity for such. Owing firstly to the difficulty of getting repairs done during the war and immediately after, from scarcity of skilled labour and material, and latterly to the fact that many tenants are behind in their rents, due to unem-

ployment, necessary repairs have in many cases not been carried out, and property, originally built to bygone standards of air-space and lighting, has been allowed to assume the further defects of dampness and dilapidation.

I have drawn attention earlier in this report to the fact that the death-rate in your district has been for many years almost uniformly higher than in any of the surrounding districts of similar constitution. Of these the urban districts of Loftus and of Skelton and Brotton have most resemblance as regards industries, density of population, prevalent size of house, etc., and the death rates in the three districts for some years have been as follows :

Standardised Death-rates :			
	Guisborough U. D.	Loftus U. D.	Skelton & Brotton U. D.
1909—13	14.1	13.6	13.2
1914—18	15.0	13.3	15.7
1919—23	12.4	10.5	11.7
1924	13.0	9.2	11.4
1925	12.6	10.3	10.0

The rate in the period 1914—18 was largely affected by the influenza epidemic of 1918, but the figures certainly suggest that the relative excess of death-rate in the district, which was slight ten or fifteen years ago, is now becoming more marked and, in fact, in the neighbourhood of 25%.

I have recently reported to you on the local variations of infant mortality within your district, which is recapitulated on a later page, and the explanation of these variations which I suggested was that they were largely dependent on conditions of housing : that the heavy infant mortality rates were associated with bad houses and the habits of the people who lived in them. Also the most probable explanation of the increasing discrepancy in the general death-rates of this and neighbouring similar districts is that it is due to differences of sanitary conditions of houses.

I have therefore recommended that systematic house inspection under the Housing Acts be instituted in the current year, and that a commencement be made with all houses in the Belmangate area, after which Westgate and the Courts off it should receive the like attention.

Unhealthy Areas :—No complaints have been received nor representations made, regarding unhealthy areas.

Bye-laws relating to Houses, etc. :—Remodelled bye-laws as to New Buildings were approved in 1925. The number of new buildings is small and no difficulty has yet been experienced in the working of the bye-laws.

The bye-laws for tents, vans and sheds, were approved in 1917, and no need has yet arisen for their alteration.

Housing Statistics for the year 1925 are displayed in Table 7.

Inspection and Supervision of Food.

(a) **Milk Supply:**—The milk-supply of the district is produced within it and quantities are also sent to a large town near. There are 24 retail purveyors on the register and 7 wholesale producers: no licences have been requested for the sale of milk under special designations, ("Grade A" etc.) and no registration has been refused or revoked. No bacteriological examination of samples of milk has been carried out.

Milk-stores and dairies in which cattle are not kept are maintained in a clean condition. The regulations as to cubic space in cowsheds and as to limewashing are observed.

(b) **Meat:**—Arrangements for the inspection of meat under the Public Health (Meat) Regulations, 1924, work satisfactorily. The regular days and hours of slaughtering for each butcher are registered at the office; notice of slaughter outside these hours is to be given three hours before the time of slaughter. After slaughter the carcase is examined by your inspector and very little unsound meat has been found. Since the regulations came into force on April 1st, a total of 347 beasts, 27 calves, 708 sheep and lambs, and 418 pigs, have been slaughtered, and only two carcases have been found unsound, one, a beast, for dropsy, the other, a pig.

It has not been a local practice to hang meat up outside butchers' shops, and, generally, protection against dust and other contamination is well carried out.

There is no public slaughterhouse in the district.

Private Slaughterhouses in use:

	In 1920.	In January, 1925.	In December, 1925.
Registered	3	3	3
Licensed	3	3	3
Total	6	6	6

(c) **Other Foods:**—No fruit, vegetables, or other foods, were condemned as unfit for food. Bakehouses are generally kept in good condition: fried-fish shops also are usually maintained in exemplary condition of cleanliness.

(d) No cases of food-poisoning in the district have come to my notice.

Prevalence of, and control over, Infectious Diseases.

The following table indicates the prevalence of the most important notifiable infectious diseases (excluding tuberculosis) in recent years:—

	<u>Total Notifications received in period</u>						•
	1916-1920.	1921.	1922.	1923.	1924.	1925.	1921-1925.
Scarlet Fever	65	2	10	18	122	19	171
Diphtheria	32	2	1	1	0	7	11
Enteric Fever	1	0	0	4	2	0	6
Encephalitis lethargica —	—	—	—	0	1	0	1

Deaths from the chief infectious diseases are given below :—

Deaths from	Deaths in period						1921-1925.
	1916-1920.	1921.	1922.	1923.	1924.	1925.	
Scarlet fever	1	—	—	—	2	—	2
Diphtheria	2	—	—	—	—	—	0
Enteric Fever	1	—	—	—	—	1	1
Measles	9	8	—	—	—	3	11
Whooping-cough	3	—	1	—	—	—	1

As the population has varied little in the ten years reviewed, a change in the numbers of notifications indicates a corresponding change in the prevalence.

The chief point about scarlet fever is the large epidemic experienced in 1924, nearly as large as the epidemic of 1905, when 150 cases were notified. The prevalent type of disease was very mild, with slight indisposition, and, owing to the comparative absence of the disease from the district in the preceding ten years, a large proportion of the children were susceptible to the infection. Towards the end of the epidemic the type of illness became graver and two deaths occurred in November, one from acute toxæmia and the other from more chronic sepsis and toxæmia.

An important change in procedure with regard to the control of scarlet fever was instituted in 1923. The minimum period of isolation in this disease insisted on by the sanitary department had, up till then, been six weeks. I recommended, however, that cases could be discharged from hospital, or, if treated at home, released from isolation, in not less than four weeks from the date of appearance of the rash, provided convalescence was completed and there was no sore throat, discharge from the ear or nose, suppurating or recently enlarged glands, or eczematous patches. The average stay in hospital has been reduced by ten days, or about one-fourth of the previous period of hospital treatment. During 1924, 51 cases were treated in hospital and there were 3 return cases, that is, cases originating in the home within a few days of the return thereof of another child from the hospital, and presumably due to infection brought to the home from the hospital. Two of the infecting patients had, at the time of onset of the return case, a discharge from the nose: the third had a discharge from the ear. One had been kept in hospital 43 days, another 37 days, and the third 38 days. In 1925, with 12 cases treated in hospital, there were no return cases.

Unlike scarlet fever, diphtheria in recent years does show a sustained decline. This does not deny the possibility of a more or less serious recurrence of the disease in response to the unknown factors favourable to it. A stock of diphtheria antitoxin, in 4000-unit phials, is maintained at the Council Office, and practitioners can be supplied from this at any time; the antitoxin is freely used, and is administered uniformly by inoculation. In the five years 1910—1914 there were 117 cases notified in the district, with 9 deaths: in 1915—1919, 50 cases and 3 deaths; in 1920—1924, 9 cases and no deaths; and in 1925, 7 cases and no deaths. The fatality of the disease therefore is much the same as the average over England and Wales, which is between 6 and 7 deaths for every 100 cases:

Free examination of bacteriological material from suspected cases of diphtheria has been afforded by the Council since 1901. Up till 1924 this was carried out at the Laboratory of the College of Medicine, Newcastle, but, in order to avoid postal delays, from 1924 onwards, swabs have been examined by the medical officer of health. There is no doubt that the value of this examination is appreciated, and the number of swabs submitted for report increases steadily: in 1902 and 1903 there were 120 notified cases of diphtheria in the whole Guisborough Union and 58 swabs were submitted, or about 10 swabs for every 20 cases: in 1908 and 1909, for every 20 cases there were 15 swabs sent in: in 1920 and 1921, 37 swabs for every 20 cases; and in 1924 and 1925, 84 swabs for every 20 cases.

Enteric fever is now an infrequent disease: in the ten years 1891—1900 there were 46 cases in the district and 11 deaths; 1901—1910, 15 cases and 3 deaths; 1911—1920, 7 cases and 2 deaths. From 1917 there was an interval of five years with no case notified, then in 1923 there were 4 cases in two families, and in 1924 two cases in one family, with no deaths. Of the cases in 1923 one gave a positive Widal test for the *B. Typhosus*: other two were negative for that and the Paratyphoid bacilli A and B. Of the two cases in 1924 a Widal test taken in one was positive for *B. Typhosus*. A death was registered in 1925 as due to typhoid fever, the Widal test, taken on the 18th day of disease, having been negative for the three bacilli.

One case only of encephalitis lethargica, or sleepy sickness, has so far been notified in your district: this was in 1924, a typical case in a male aged 44, who recovered from the immediate attack but was later removed to a mental hospital and there died nearly two years after the onset of the disease.

With regard to diseases notifiable under the Regulations of the 7th January, 1919, no case of trench fever nor dysentery has been notified to me; 1 case of malaria was notified in 1919, a relapse of war-contracted disease. On the other hand, notifications of pneumonia tend to increase:—

Pneumonia, Guisborough Urban District:		
	Notified Cases.	Deaths.
1919	18	7
1920	11	9
1921	22	1
1922	48	9
1923	31	3
1924	66	5
1925	20	8

Although one has not the precise information regarding the number of cases of measles or of whooping-cough that one has of the notifiable diseases, there can be little doubt that there has been no diminution of recent years in the prevalence of these diseases, nor any marked lessening of the number of deaths caused by them. Together they are easily the most serious of the acute infective diseases still existing, both in respect of the toll of death they levy, and of the lasting deterioration of health they cause in a large number of the survivors.

Under arrangements made by the County School Medical Officer the head teachers of the elementary schools send intimation, as to absentees in which the cause is believed to be infectious disease, both to the County School Medical Officer and to myself. These intimations furnish practically my sole information as to the prevalence of non-notifiable infectious disease and are highly appreciated. Of recent years school closure for measles, whooping-cough, etc., has been officially discountenanced, and the action of the medical officer of health has been more limited to advice as to the exclusion of individual children and to arranging for the disinfection of pencils and penholders used in common, and the occasional disinfection of school buildings.

The mortality from Influenza has not, in recent years, reached the high level attained in 1918 and 1919. The death-rate from this cause in each of the eight years from 1918 to 1925 having been:—6.1, 2.7, 0.0, 0.6, 0.7, 0.0, 1.1, and 0.7. The epidemic in 1924 was at its height in March, and was accompanied, as the notifications show, by pneumonia; all ages were affected.

The arrangements made for the examination of bacteriological specimens in diphtheria have been already detailed, while dealing with that disease. Similar arrangements hold for the examination of sputa for tubercle bacilli. Specimens for Widal test in suspected enteric cases are sent direct to the Armstrong College Laboratory, Newcastle, with whom arrangements have been made by the Council. Reference to the use made of these facilities has been already made, and details for the year 1925 are given in Table 3.

Hospital isolation has been practised chiefly in scarlet fever, but occasional cases of diphtheria and of enteric fever have been removed to hospital. In cases of the notifiable infectious diseases which are treated at home, isolation as complete as practicable is insisted on. As already mentioned the minimum isolation period in scarlet fever has been reduced to four weeks, and return to school or mingling with other children is not advised until one week after the disinfection that is carried out then. In diphtheria, isolation is continued until two successive negative swabs have been obtained or until one week after convalescence is quite complete and the throat normal. Neither Schick nor Dick tests have yet been employed. No primary vaccinations nor re-vaccinations in the district have been performed by the medical officer of health.

Disinfection of premises and articles is carried out by means of formalin spray or formalin lamps. No facilities exist for the cleansing of verminous persons, although assistance has been given in the disinfestation of houses from fleas, lice, etc.

Particulars of notifications received during the year are given in Table 1.

Tuberculosis:—The number of new cases that have come to my knowledge, by notification or otherwise, during 1925, and also the number of deaths from the disease, at different ages, is given in Table 2. The death-rate from tuberculosis shows a decline from a maximum in the years before the war: in the five years 1904—08, it was 1.33; in 1909—13, 1.64; in 1914—18, 1.21; 1919—23, 0.84; while in 1924 and also in 1925, it was 1.0.

The administrative measures that are employed are :—

(1) As an aid to diagnosis free examination of sputa is offered by the local authority.

(2) When a case is notified, the premises are visited by the medical officer of health or the sanitary inspector, action is taken in regard to any housing defects or overcrowding discovered, general advice as to admission of fresh-air and prevention of infection is given, and assistance offered through the private medical attendant in bringing the patient into touch with the County Council scheme for treatment :—

(3) Spitting cups and disinfectant are supplied free.

(4) Disinfection of rooms occupied by the patient is carried out when the patient is removed.

Less advantage is taken of the bacteriological facilities offered in tuberculosis than in diphtheria. Throughout the Guisborough Union, taking all the cases stated by medical practitioners, in notification or in death-registration, to have suffered from pulmonary tuberculosis, in about three out of four sputum is never submitted for examination. In many cases, of course, the clinical signs of pulmonary tuberculosis may seem obvious without recourse to sputum examination, which latter again may yield negative results for some time in undoubted cases. Notwithstanding its limitations the laboratory report may be of value in every case: it certainly gives point to advice as to precautions to be taken to guard against infection, and it should be of assistance in the prognosis, or forecast of the progress of the disease. To illustrate this latter point none of the 104 patients whose sputum has been reported during 1924 and 1925 as not containing tubercle bacilli has, so far as I have been able to discover, died, as yet, from this disease. 36 have been reported by myself as containing tubercle bacilli in sputa, and of these patients four have left the district, and nineteen of the remaining thirty-two have died before the middle of May, 1926. In nine of those with positive sputa the report stated that the number of bacilli per microscope field was not more than one in two or more fields: seven of these patients still survive, periods of from 7 to 27 months having elapsed since the sputum examination; two have died, surviving 11 and 18 months respectively after the report, and in the first the tuberculosis was complicated by cancer elsewhere. In eleven cases the report stated the average number of bacilli per field as between 1 and 10; one of these left the district, five of the remainder died, and five still survive. In sixteen cases the number of bacilli was stated as being more than ten per field: three of these left the district, one still survives, after eight months, and twelve died after an average interval of $4\frac{1}{2}$ months. The prognosis can therefore be regarded as good, doubtful, or bad, according to the number of bacilli found in the sputum, and this forecast may itself be of assistance in the treatment of the disease.

Notification of cases of tuberculosis by local practitioners, while not complete, is above the average for districts of the North Riding. The numbers in recent years, and also the deaths registered from all forms of tuberculosis, are as follows :—

		Notifications from local practitioners.	Deaths.
1922	...	15	3
1923	...	17	4
1924	...	29	7
1925	...	11	7

Except for 1925 the proportion of notifications to deaths has been more than four to one. Of the seven fatal cases in 1925 five had not been notified to me as suffering from tuberculosis, but two of these died outside the district in mental hospitals.

Under the Articles of the Public Health (Prevention of Tuberculosis) Regulations 1925, relating to tuberculous employees in the milk trade, no action has yet been found necessary. Also under sec. 62 of the Public Health Act 1925, referring to compulsory removal to hospital of certain tuberculous cases, no action has yet been found necessary.

Maternity and Child Welfare.

Under the Notification of Births Act practically all the births are notified to me within 36 hours. The information received is transmitted weekly to the County Medical Officer of Health and to the local registrar of births.

Births registered in 1925	-	-	-	-	146
Live births notified in 1925	-	-	-	-	151
Still births notified in 1925	-	-	-	-	5
Total births notified by midwives in 1925	-	-	-	-	39

As births occurring in the district may be registered elsewhere, according to the usual residence of the parent, the notified births may, as in this year, exceed those registered.

A voluntary Maternity and Child Welfare Centre was commenced during the war and was taken over by the District Council in 1919: an annual subsidy of £25 is received for it from the County Council. It is open for infants' and mothers' consultations every Thursday in the Chaloner Hall, from 2-30 to 4 o'clock, a doctor being in attendance. The average attendance of children per session during 1925 has been 25.

The course of infant mortality in the district is given in the following table:—

Infant Mortality Rate (infant deaths per 1000 births).					
5 years 1884—1888	-	-	-	-	146
5 years 1889—1893	-	-	-	-	108
5 years 1894—1898	-	-	-	-	108
5 years 1899—1903	-	-	-	-	142
5 years 1904—1908	-	-	-	-	129
5 years 1909—1913	-	-	-	-	123
5 years 1914—1918	-	-	-	-	106
5 years 1919—1923	-	-	-	-	98
1924	-	-	-	-	68
1925	-	-	-	-	82

There has been a steady decline since about 1900: before that, for ten years, a comparatively low rate was experienced, practically equal to the rate during the years 1914—1918, while earlier again the rate was high. It is noteworthy that the earlier ten years of lessened infant mortality from 1889 to 1898, roughly coincided with a period of depression in the local ironstone mining industry: hard times are not inconsistent with better mothering.

I have lately reported to you on the local variations within the district of the infant mortality rate. Taking the four years 1922 to 1925 the average rate over the whole district was 85 infant deaths per 1000 births; for the same years the rate in Westgate and the courts off it was 143; in Bow Street, Belmangate and the courts off, 120; in the streets south of Westgate and west of Bow Street, 73½; in the streets north of Westgate and west of Northgate, 70½; in Northgate, Church Street, Redcar Road, and the intermediate streets, 53½; while in the portion of the district outside the town of Guisborough, it has been 97½, although this figure may be slightly exaggerated by the possible imperfection of the birth notifications on which these rates are based. A general view of the result shows that, as in large towns, there is a definite association of high infant mortality with insanitary housing, and there can be little doubt that the raising of the standard of housing would lead to the saving of lives and the improvement of health. It might be objected that even in the district of the town with the lowest infant mortality, that from Redcar Road to Northgate, there is still a large amount of poor property, but practically all the infant deaths in that area have in fact been in the poor property, Church Street, Redcar Road, Bennison Street, Union Street and Walker's Row having experienced no infant deaths at all in these four years.

Maternal mortality from sepsis (puerperal fever) in the eight years 1918—1925 has averaged 0.68 maternal deaths per thousand births, as compared with a figure of 1.54 throughout England and Wales in the seven years 1918—1924. For the same periods maternal mortality from other causes than sepsis has been in your district 5.42, and, in the whole country, 2.23. Of the last seven maternal deaths from causes other than sepsis in your district, in the years 1919 to 1925, one was registered as due to hyperemesis gravidarum, one to pyelitis, and all the others to eclampsia, nephritis or uræmia. This last condition, under its different names, is a disease of pregnancy reaching its gravest point at or about the confinement: it can be recognised, and best treated, much earlier, so that a necessity in the diminution of the unfortunate number of deaths at or after confinement is that all pregnant women should consult a doctor as to their health on two or three occasions during the course of their pregnancy.

No case of ophthalmia neonatorum, or inflammation of the eyes in new-born babies, has been notified in your district in the five years 1921 to 1925.

I am, Gentlemen,

Your obedient servant,

C. R. GIBSON.

28th June, 1926.

1. Notifiable Diseases during the Year 1925.

Disease.	Total Cases notified.	Cases admitted in Hospital.	Total Deaths.
Smallpox ..	—	—	—
Diphtheria ...	7	3	—
Scarlet Fever ...	19	12	—
Enteric Fever (including Paratyphoid) ...	—	—	—
Puerperal Fever ...	—	—	—
Pneumonia ...	20	—	8
Other diseases generally notifiable :—			
Enceph. Lethargica ...	—	—	—
Erysipelas ...	3	—	—
Ophthalmia Neonatorum ...	—	—	—

2. TUBERCULOSIS.

Age-Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year	—	—	—	—	—	—	—	—
1—4 years	—	—	1	1	—	—	—	—
5—9 years	2	1	—	1	1	—	—	—
10—14 years	1	—	—	2	—	—	—	—
15—19 years	—	—	—	1	—	—	—	—
20—24 years	—	—	1	—	—	—	—	—
25—34 years	—	2	—	—	1	1	—	—
35—44 years	—	—	—	—	1	—	—	—
45—54 years	—	—	—	—	—	1	1	1
55—64 years	—	1	—	—	—	—	—	—
65 years and upwards	—	—	—	—	—	—	—	—
All ages	3	4	2	5	3	2	1	1

3. LABORATORY WORK, ETC.

	Borough of Redcar.	Guisborough Rural District.	Guisborough Urban District.	Loftus Urban District.	Saltburn- by-the-Sea Urban District.	Skelton and Breton Urban District.	Total.
Sputa examined for Tubercle bacilli	31	7	7	9	6	9	69
Sputa found positive	10	3	2	1	1	1	18
Swabs from Diphtheria suspects examined	19	10	12	2	2	9	54
Swabs from Diphtheria suspects found positive	4	1	6	0	0	3	14
Swabs from Diphtheria convalescents examined	2 (0 positive)	6 (3 positive)	9 (3 positive)	0	0	9 (3 positive)	26
Swabs from Diphtheria contacts	—	—	—	—	—	—	—
Blood examined for Enteric Fever (Widal Test)	2 (negative)	2 (negative)	1 (negative)	—	—	1 (negative)	6 (negative)
Examination of Milk for Tubercle Bacilli	10 (all neg.)	—	—	—	—	—	10 (negative)
Other examinations	—	2	1	—	—	2	5
Diphtheria Antitoxin issued by Local Authority	Yes	Yes	Yes	Yes	Yes	Yes	

4. ADOPTIVE ACTS, BYELAWS AND REGULATIONS in force in the Districts.

	Borough of Redcar.	Guisborough Rural District.	Guisborough Urban District.	Loftus Urban District.	Saltburn- by-the-Sea Urban District.	Skelton and Brotton Urban District.
A. ADOPTIVE ACTS.						
Infectious Diseases (Prevention) Act, 1890	Adopted 1921	—	—	Adopted 1891	Adopted 1891	—
Public Health Acts (Amendment) Act, 1890, Part III	Adopted 1891	Adopted 1896	Adopted 1893	Adopted 1891	Adopted 1891	Adopted 1896
Public Health Acts (Amendment) Act, 1907, Chief Sanitary Sections ...	Adopted 1908	—	Adopted 1912	Adopted 1908	Adopted 1908	Adopted 1912
B. BYELAWS.						
New Streets and Buildings	1921	1925	1925	1925	1923	1925
Cleansing of Footways, Removal of House Refuse, Cleansing of Privies, etc. ...	1893	1901	1893	1879	—	1879
Nuisances	1893	—	1893	1879	1882	1879
Common Lodging Houses	1893	1878	1893	1879	1882	1879
Slaughter-houses	1893	1901	1893	1879	1882	1879
Tents, Vans and Sheds	1924	1914	1917	—	1911	—
Offensive Trades	1922	—	—	—	—	—
Houses let in lodgings	1925	—	—	—	—	—
C. REGULATIONS.						
Dairies, Cowsheds and Milkshops ...	1895	—	1900	1900	1900	1906
Removal to Hospital of Persons brought within the District by any ship or boat	—	—	—	1909	—	—

5. ABSTRACT OF THE WORK OF THE SANITARY DEPARTMENT.

	Number dealt with.	Informal Notices.		Statutory Notices.	Result.	Remarks.
Nuisances ...	121	121		14	All abated	80 closet pans renewed, 15 new covered metal dustbins provided, 1 dirty house cleansed.
Slaughter-houses ...	6	1		0	Compliance	—
Dairies and Cowsheds ...	31	62 (to fine-week)		0	Compliance	—
Bakehouses ...	7	2		0	Compliance	—
Factories and Workshops (other than Bakehouses)	58	2		0	Compliance	—
Offensive Trades ... (fishery)	5	0		0	—	—
Common Lodging House ...	1	0		0	—	—
Music Halls, Cinemas, etc. ...	1	0		0	—	—
Premises Disinfected ...	41	0		0	—	—

6. PUBLIC HEALTH STAFF.

	Borough of Redcar.	Guisborough Rural District.	Guisborough Urban District.	Loftus Urban District.	Saltburn-by-the-Sea Urban District.	Skelton & Brotton Urban District.
A. WHOLE-TIME OFFICERS.						
Medical Officer of Health ...						
Sanitary Inspectors ...	Mr. W. Tutin Mr. R. Milligan from July 21	Mr. G. W. Shipley*	Mr. R. H. Kilburn*	Mr. P. H. Audsley*	Mr. T. Young*	Mr. A. R. Cranmer* until March 31 Mr. A. Cummings from April 1
B. PART-TIME OFFICERS.						
Medical Officers to Maternity and Child Welfare Centres	—	—	Dr. Bland Dr. Stain- thorpe	Dr. Stephen	—	Dr. Botham Dr. Caldwell Dr. Howe

Dr. C. R. Gibson.

* Also Surveyor for the district concerned.

7. HOUSING.

	Borough of Redcar.	Guisborough Rural District.	Guisborough Urban District.	Loftus Urban District.	Saltburn Urban District.	Shelton & Brotton Urban District.
New Houses erected in 1925						
{ Total ...	381	15	2	1	66	0
{ With Subsidy ...	115	13	2	0	66	3 Temporary Buildings
{ Without Subsidy ...	50	2	1	1	0	0
Under District Council Scheme ...	216	0	0	0	19	0
Houses inspected under Public Health or Housing Acts ...	33	0	27	21	6	232
Houses inspected under Housing Regu- lations ...	27	0	9	3	6	232
Houses found unfit for habitation ...	10	0	0	0	0	0
Houses found requiring repair ...	50	0	9	8	6	190
Houses repaired in consequence of informal notices ...	50	0	7	5	3	121
Proceedings under Sec. 3 of the Housing Act 1925						
(1) Houses respecting which formal notices were served ...	0	0	2	3	3	10
(2) Houses rendered fit by Owners ...	0	0	2	3	3	4
(3) Houses rendered fit by L. A. ...	0	0	0	0	0	3
(4) Houses voluntarily closed by Owners	0	0	0	0	0	0
Proceedings under Public Health Acts :						
(1) Houses respecting which formal notices were served ...	0	0	0	0	6	5
(2) Houses repaired by Owners ...	0	0	0	0	6	4
(3) Houses repaired by L. A. ...	0	0	0	0	0	0
Proceedings under Secs. 11, 14, 15 of the Housing Act 1925						
Closing Order made ...	10	0	0	0	0	0
Other action	0	0	0	0	0	0

8. COMPARATIVE SUMMARY OF VITAL STATISTICS.

	Stelton & Brocton Urban District.	Loftus Urban District.	Guisborough Urban District.	Guisborough Rural District.	Borough of Redcar.	Salisbury-by-the-Sea Urban District.	England and Wales.
Percentage of houses in 1921 with fewer than six rooms	87	86	84	75	69	35	(70)
Birth-rate { 1925 ... { 1924 ...	18·7 20·6	17·7 19·9	21·0 20·9	18·7 20·0	17·2 19·1	12·0 11·7	18·3 18·8
Death-rate { 1925 ... { 1924 ...	10·4 11·9	10·4 9·2	14·2 14·6	11·9 13·9	11·2 12·0	13·1 11·7	12·2 12·2
Infant Mortality Rate { 1925 ... { 1924 ...	50½ 77	66½ 43	82 68	110 132½	81 75	43½ 66½	75 75

Comparisons between localities are open to many fallacies: differences in social composition (such as are indicated in the first row of the table) must be taken into consideration; further, before comparing birth-rates a knowledge of the relative proportion of young married women in the districts is necessary, or before comparing death-rates, information as to the relative numbers of people at ages when death is less avoidable.

